FORM PTO-1449			U.S. Dept. of Comn	nerce	Atty Docket No. Serial No.						
			Patent and Trademark	Office	P0710P1D1 not yet a		yet ass	igned			
			r alent and mademan	Conice	Applicant						
LIST OF DISCLOSURES CITED BY APPLICANT			BY APPLICANT	Carter							
1 (	Jse sev	reral sheets if necessary	y)			Filing	Date		Group	P	
,				1		1	5 Nov 2000		not	yet ass:	igned
				U.S. PATENT DOCUME	NTS						
Examiner	1	]					]	T			
nitials		Document Number	Date	Name			Class	Subo	class	Filing	Date
my	* 1	4,444,878	24.04.84	Paulus et al.							
1 1	* 2	4,642,334	10.02.87	Moore et al.		i	}	1		05.12	. 83
<b>!</b>	<b>*</b> 3	4,816,567	28.03.89	Cabilly et al.	3 三	_	}	}			
1 1	+ 4	4,946,778	07.08.90	Ladner et al.	3 三	5	}	1		1	
1 1	* 5	5,219,966	15.06.93	Bodmer, et al.		?		ł		03.07	. 89
1 1	* 6	5,618,920	08.04.97	Robinson et al.	<b>5</b>	•	ļ	{		29.04	.94
}	* 7	5,648,237	15.07.97	Carter, P.			]	ì		03.05	.95
}	* 8	5,698,417	16.12.97	Robinson et al.	===		}	}		1	
d	. 9	5,698,435	16.12.97	Robinson et al.			Ì	1		1	
	L		L	FOREIGN PATENT DOC	UMENTS		L	<u> </u>		L	·
Examiner		T					Γ			Transla	ation
Initials		Document Number	Date	Country			Class	Subo	class	Yes	No
and	*10	AU-A-27617/88	07.06.89	AUSTRALIA							
0	*11	AU-B-57621/90	03.01.91	AUSTRALIA				1		, ,	i \$
1 }	*12	0338745	25.10.89	EPO						1 1	
1 /	*13	136,907	10.04.85	EPO ,			} }	1		[ [	
11	*14	459,577	04.12.91	EPO				}			
1	*15	WO 89/01783	09.03.89	PCT			}	}			
11	*16	WO 89/01974	09.03.89	PCT				1		i i	
	*17	WO 89/06692	27.07.89	PCT				ł			
	*18	WO 92/01059.	23.01.92	PCT				•			
1 1	*19	WO 92/10209	25.06.92	PCT						1	
$  M_{I} \rangle$	*20	WO 92/22324	23.12.92	PCT				į		1 1	l
	*21	WO 93/12220	24.06.93	PCT				]		1	1
	L	<u> </u>	ATTIES 21001	201050 (1.1.2.4.4.4	U- D-4- /			Ļ		<u> </u>	
		lavelegon K "Bac		OSURES (Including Author, Tites and Glutathi					1514 0	ontamin	nts of
m.	*22			th the Use of E. coli Kl							
X		39(1):69-77 (1985		of engineered antibodies	and ant	ibady	Fragments	in m	croor	ganisms'	,
	*23	Methods in Enzymo	_							3-11-1-0-110	ļ
<del>  </del>	<del> </del>	Better et al "E	scherichia coli	secretion of an active	chimeric	anti	body fragme	nt"	Scienc	e	
	*24	240:1041-1043 (19								_	1
		Better et al., "Potent anti-CD5 ricin A chain immunoconjugates from bacterially produced Fab' and									
	*25	1		USA 90:457-461 (1993)	•		_				1
+		Better et al., "P	roduction and S	scale Up of Chimeric Fab	Fragment	s fro	m Bacteria*	Adv	ances	in Gene	
	*26	Technology: The M	olecular Bioloc	y of Immune Diseases & t							
et al., eds. Vol. 10:105 (1990)     Bird et al., "Single-chain antigen-binding proteins" Science 242:423-426 (Oct 1988)											
<b>)</b>	*27	1									l
Examine		·	<del></del>		Da	te Cons	sidered				
	<   <sub> </sub>	month &			]		3-	Va	1-0	4	1
*Examir	er: Ini	tial if reference conside	ered, whether or no	t citation is in conformance wit	h MPEP 6	09; dra					
					if not in conformance and not considered. Include copy of this form with next communication to applicant.						

FORM PTO-1449 U.S. Dept. of Commerce			Atty Docket No.	Serial No.		
		Patent and Trademark Office	P0710P1D1	not yet assigned		
1 101	י טב חופ	SCLOSURES CITED BY APPLICANT	Applicant Carter			
				Group		
((	Use sev	eral sheets if necessary)	Filing Date 15 Nov 2000	Group not yet assigned		
	<del></del>	OTHER DISCLOSURES (Including Author, Title, Date,	Pertinent Pages, etc.)			
	т —	Boss et al., "Assembly of functional antibodies from immunoglob		chains synthesised		
Lie	*28	in E. coli Nucleic Acids Research 12(9):3791-3806 (1984)				
	Brennan et al., "Preparation of bispecific antibodies by chemical recombination of monoclonal immunoglobulin G <sub>1</sub> fragments" <u>Science</u> 229:81-83 (July 1985)					
	Burgess et al., "Possible Dissociation of the Heparin-binding and Mitogenic Activities of  *30 Heparin-binding (Acidic Fibroblast) Growth Factor-1 from Its Receptor-binding Activities by  Site-directed Mutagenesis of a Single Lysine Residue" Journal of Cell Biology 111:2129-2138 (1990)					
	*31	Cabilly et al., "Generation of Antibody Activity from Immunoglo Escherichia coli" Proc. Natl. Acad. Sci. USA 81:3273-3277 (1984)	)	•		
	*32	Cabilly, Shmuel, "Growth at sub-optimal temperatures allows the antigen-binding Fab fragments in Escherichia coli" Gene 85:553-		onal,		
	*33	Carter et al., "High level Escherichia coli expression and proc fragment" <u>Bio/Technology</u> 10:163-167 (1992)	uction of a bivalent	humanized antibody		
	*34	Carter et al., "Humanization of an anti-p185HER2 antibody for h Sci. 89:4285-4289 (May 1992)	uman cancer therapy"	Proc. Natl. Acad.		
	*35	Carter, P. and Wells, J.A., "Engineering enzyme specificity by 237:394-399 (1987)	"substrate-assisted c	atalysis" <u>Science</u>		
	*36	Chothia et al., "Domain Association in Immunoglobulin Molecules. The Packing of Variable Domains"  Journal of Molecular Biology 186:651-663 (1985)				
	*37	Condra et al., "Bacterial expression of antibody fragments that block human rhinovirus infection of cultured cells" <u>Journal of Biological Chemistry</u> 265(4):2292-2295 (1990)				
1	*38	Cumber et al., "Comparative stabilities in vitro and in vivo of a recombinant mouse antibody FvCys fragment and a bisFvCys conjugate" J. Immunol. 149(1):120-126 (1992)				
	*39	Fanger et al., "Bispecific antibodies and targeted cellular cyt (1991)	otoxicity" <u>Immunology</u>	Today 12(2):51-54		
	*40	Fendly et al., "Characterization of Murine Monoclonal Antibodies Reactive to Either the Human Epidermal Growth Factor Receptor or HER2/neu Gene Product" <u>Cancer Research</u> 50:1550-1558 (Mar 1, 1990)				
	*41	Gavit et al., "Purification of a Mouse-Human Chimeric Fab Secreted from E. coli" <u>BioPharm</u> pps. 28-29, 32-34, 58 (1992)				
1	*42	Gilles et al., "Antigen binding and biological activities of engineered mutant chimeric antibodies with human tumor specificities" <u>Hum, Antibod, Hybridomas</u> 1(1):47-54 (1990)				
1	*43.	Glennie et al., "Preparation and Performance of Bispecific F(ab'γ) <sub>2</sub> Antibody Containing Thioether-Linked Fab'γ Fragments" J. Immunol. 139(7):2367-2375 (October 1, 1987)				
	*44	Glennie M.J. et al., "Bispecific F(ab'γ) <sub>2</sub> antibody for the delivery of saporin in the treatment of lymphoma" J. Immunol. 141(10):3662-3670 (1988)				
	*45	Glockshuber et al., "A Comparison of Strategies to Stabilize Immunoglobulin F <sub>V</sub> -Fragments" <u>Biochemistry</u> 29:1362-1367 (1990)				
	*46	Hammerling et al., "Use of hybrid antibody with anti-yG and anti-ferritin specificities in locating cell surface antigens by electron microscopy" Journal of Experimental Medicine 128:1461-1469 (1968)				
4	*47	Hasemann and Capra, 'High-level production of a functional immu expression system' Proc. Natl. Acad. Sci. USA 87:3942-3946 (199		r in a baculovirus		
Examin	er	nión 9	ate Considered 3-2	9-04		
*Exami if not	iner: Ini in conf	tial if reference considered, whether or not citation is in conformance with MPEP formance and not considered. Include copy of this form with next communication	609; draw line through cita to applicant.	tion		

FORM PTO-1449 U.S. Dept. of Commerce			Atty Docket No.	Serial No.			
13.11.77			P0710P1D1	not yet assigned			
		Patent and Trademark Office	Applicant	Applicant			
LIST	OF DIS	SCLOSURES CITED BY APPLICANT	Carter				
(Use several sheets if necessary)			Filing Date	Group			
,			15 Nov 2000	not yet assigned			
		OTHER DISCLOSURES (Including Author, Title, Date		eradish Perovidaso			
my	*48	Hashida et al., "More Useful Maleimide Compounds for the Conju Through Thiol Groups in the Hinge" <u>Journal of Applied Biochemi</u>	<u>stry</u> 6:56-63 (1984)				
1	Horwitz et al., "Secretion of functional antibody and Fab fragment from yeast cells" Proc. Natl *49 Sci. USA 85:8678-8682 (1988)						
	<b>*50</b>	Human Breast Tumor Cells to Tumor Necrosis Factor Molecular &	185HERZ Monoclonal Antibody Has Antiproliferative Effects In Vitro and Sensitizes Cells to Tumor Necrosis Factor Molecular & Cellular Biology 9(3):1165-1172 (Mar 1989)				
	*51	Huse et al., "Generation of a large combinatorial library of t lambda" <u>Science</u> 246:1275-1281 (1989)					
	*52	Huston et al., *Protein engineering of antibody binding sites: anti-digoxin single-chain Fv analogue produced in Escherichia 85:5879-5883 (Aug 1988)	coli" Proc. Natl. Acad	l. Sci. USA			
	*53	Johnstone et al. <u>Immunochemistry in Practice</u> , Blackwell Scient					
	*54	Jungbauer et al., "Pilot scale production of a human monoclona virus HIV-1" <u>Journal of Biochemical and Biophysical Methods</u> 19	9:223-240 (1989)				
	<b>*</b> 55	Kabat et al. <u>Sequences of Proteins of Immunological Interest</u> , Bethesda, MD:National Institutes of Health pps. iii-xxiii, 41-76 and 160-167 (1987)					
	*56	King et al., "Tumor Localization of Engineered Antibody Fragments" Antibody. Immunoconiugates. & Radiopharmaceuticals 5(2):159-170 (1992)					
	*57	Lazar et al., "Transforming Growth Factor α: Mutation of Aspartic Acid 47 and Leucine 48 Results in Different Biological Activities" Molecular & Cellular Biology 8(3):1247-1252 (Mar. 1988)					
	*58	Liu et al., "Heteroantibody duplexes target cells for lysis by cytotoxic T lymphocytes" Proc. Natl. Acad. Sci. USA 82:8648-8652 (1985)					
	*59	Lupu et al., "Direct interaction of a ligand for the erbB2 one p185erbB2. Science 249:1552-1555 (1990)					
	Lyons et al., "Site-specific attachment to recombinant antibodies via introduced surface cysteine residues" Protein Engineering 3(8):703-708 (1990)						
	Mandy et al., "Recombination of Univalent Subunits Derived from Rabbit Antibody" The State of th						
	*62						
	*63						
	*64	Milstein et al., "Hybrid Hybridomas and Their Use in Immunohistochemistry" <u>Nature</u> 305:537-540 (1983)					
	*65	Morrison et al., "Chimeric Human Antibody Molecules: Mouse Antigen-binding Domains with Human Constant Region Domains" <u>Proc. Natl. Acad. Sci. USA</u> 81:6851-6855 (November 1984)					
	*66	Morrison et al., "Genetically Engineered Antibody Molecules and Their Application" <u>Biological Approaches</u> <u>to the Controlled Delivery of Drugs</u> , Annals of the New York Academy of Sciences, New York, New York: The New York Academy of Sciences Vol. 507:187-198 (1987)					
	*67	Morrison et al., *Production and Characterization of Genetica Chemistry 34(9):1668-1675 (1988)	lly Engineered Antibody	y Molecules" <u>Clinical</u>			
Examir	2	Torrow 2	Date Considered	7-04			
*Exam	*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.						

FORM PTO-1449 U.S. Dept. of Commerce			Atty Docket No.	Serial No.			
		Patent and Trademark Office	P0710P1D1	not yet assigned			
LICT	AE DIG	SCLOSURES CITED BY APPLICANT	Applicant				
LIST	OP DIS	SCLUSURES CITED BY APPLICANT	Carter	Group			
(L	Jse sev	eral sheets if necessary)	Filing Date 15 Nov 2000	Group not yet assigned			
OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages, etc.)							
Neuberger et al., "Recombinant Antibodies Possessing Novel Effector Functions" Nature 312:604-							
hy	*68		Marking Prodox	ick C Neidhardt			
ĺ	<b>*</b> 69	Nikaido et al., "Outer Membrane" <u>Escherichia Coli and Salmonell.</u> Washington, D.C.:American Society for Microbiology Vol. 1:7-21					
1	*70	Nisonoff and Mandy, "Quantitative estimation of the hybridization of rabbit antibodies" <u>Nature</u> 4826:355-359 (1962)					
	*71	Nitta et al., "Preliminary trial of specific targeting therapy against malignant glioma" <u>Lancet</u> 335(8686):368-371 (Feb 17, 1990)					
	*72	Nitta, T. et al., "Bispecific F(ab')2 monomer prepared with ant antibodies is most potent in induction of cytolysis of human T 19:1437-1441 (1989)	cells" <u>European Journ</u>	al of Immunology			
	*73	Nolan et al., "Bifunctional antibodies: concept, production and <a href="https://doi.org/least-1040:1-11">https://doi.org/least-1040:1-11</a> (1990)					
	*74	Novotny et al., "Structural invariants of antigen binding: comp $V_L$ - $V_L$ domain dimers" Proc. Natl. Acad. Sci. USA 82(14):4592-459	arison of immunoglobu 6 (Jul 1985)	lin V <sub>L</sub> -V <sub>H</sub> and			
	<b>*</b> 75	Padlan et al., "Antibody Fab assembly: the interface residues between CH1 and CL" Molecular Immunology 23(9):951-960 (1986)					
	*76	Pantoliano et al., "Protein engineering of subtilisin BPN': Enhanced stabilization through the introduction of two cysteines to form a disulfide bond' Biochemistry 26:2077-2082 (1987)					
	*77	Parham, "Preparation and purification of active fragments from mouse monoclonal antibodies" <u>Handbook of Experimental Immunology</u> , Weir E.M. (ed.), 4th edition, CA:Blackwell Scientific, Chapter 14, Vol. 1:14.1-14.23 (1986)					
	<b>*78</b>	Parham, Peter, "In Vitro production of a hybrid monoclonal anti that express both HLA-A2 and HLA-B7" Human Immunology 12:213-22		lly binds to cells			
	*79	Paulus, H., "Preparation and Biomedical Applications of Bispeci 78:118-132 (1985)					
	*80	Perez et al., "Specific targeting of cytotoxic T cells by anti-T3 linked to anti-target cell antibody" Nature 316:354-356 (1985)					
1	*81	Pluckthun and Skerra, "Expression of functional antibody Fv and Fab fragments in Escherichia coli" Methods in Enzymology 178:497-515 (1989)					
	*82	Pluckthun et al., "Engineering of antibodies with a known three Harbor Symposia on Quantitative Biology, Cold Spring Harbor Lab	-dimensional structur oratory Vol. LII:105-	e" <u>Cold Spring</u> 112 (1987)			
	*83	Pluckthun, Andreas, *Antibody engineering: advances from the us Biotechnology 9:545-51 (1991)	e of escherichia coli	expression systems"			
	*84	Putlitz et al., *Antibody production in baculovirus-infected in (1990)	sect cells" <u>Bio/Techn</u>	ology 8:651-654			
	*85	Raso and Griffin, "Hybrid antibodies with dual specificity for immunoglobulin-bearing target cells" Cancer Research 41:2073-20	_	to			
	*86	Riechmann et al, "Expression of an Antibody Fv Fragment in Myel (1988)	oma Cells" <u>J. Mol. Bi</u>	ol. 203:825-828			
<del>J</del>	*87	Rodrigues et al., "Engineering Fab' Fragments for Efficient F(a Improved In Vivo Stability" The Journal of Immunology 151(12):6	b) <sub>2</sub> Formation in Esch 954-6961 (December 15	erichia coli and for , 1993)			
Examin			ate Considered	0 M			
*Examination	ner: Ini in conf	tial if reference considered, whether or not citation is in conformance with MPEP formance and not considered. Include copy of this form with next communication	609; draw line through citato applicant.	ition			

Sheet	5	of	5

FORM PTO-1449 U.S. Dept. of Commerce			Atty Docket No.	Serial No.			
Patent and Trademark Office			P0710P1D1	not yet assigned			
LIS	T OF DI	SCLOSURES CITED BY APPLICANT	Applicant Carter				
	ít lea eau	reral sheets if necessary)	Filing Date	Group			
,	OSE SEV	eral sheets in necessary)	15 Nov 2000	not yet assigned			
	OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages, etc.)						
5	Skerra and Pluckthun, "Assembly of a functional immunoglobulin F <sub>V</sub> fragment in escherichia coli" Scient 188   240:1038-1041 (1988)						
4	ļ	Shares at al. Monation and in vive folding of the Esh frages	nt of the entiredy Mo	DC603 in Escherichia			
	<b>*89</b>	Skerra et al., *Secretion and in vivo folding of the Fab fragment of the antibody McPC603 in Escherichia coli: influence of disulphides and cis prolines* Protein Engineering 4(8):971-979 (1991)					
	<b>*90</b>	· · · · · · · · · · · · · · · · · · ·	Takeda et al., "Construction of Chimaeric Processed Immunoglobulin Genes Containing Mouse Variable and Human Constant Region Sequences" <u>Nature</u> 314(6010):452-454 (April 4, 1985)				
	*91	Tao et al., "Studies of aglycosylated chimeric mouse-human IgG and Effector Functions Mediated by the Human IgG Constant Region					
-	*92	Ward, E.S. et al., "Binding activities of a repertoire of single secreted from Escherichia coli" Nature 341:544-546 (1989)	e immunoglobulin vari	able domains			
	1	Zemel-Dreasen et al., *Secretion and processing of an immunoglo	bulin light chain in	Escherichia coli°			
4	<b>*93</b>	<u>Gene</u> pps. 315-322 (1984)					
			· · · · · · · · · · · · · · · · · · ·				
. <b></b> .	-						
	<del> </del>						
	ļ						
				·			
	-						
Examir	l ner		ate Considered				
		mions &	3-20	1-07			
*Exam if no	iner: Ini I in conf	itial if reference considered, whether or not citation is in conformance with MPEP formance and not considered. Include copy of this form with next communication	609; draw line through cita to applicant.	tion '			